

HISTORIC AMERICAN ENGINEERING RECORD

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HAER  
PA  
2-PITBU.V,  
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DREDGE CINCINNATI (Dredge Kanawha) HAER No. PA-345  
Docked on the Ohio River at the foot of Lighthill Street on the  
North Side of Pittsburgh. (Since the project's completion the  
dredge was sold, and reportedly moved to a dock near Sewickley,  
PA.)  
Allegheny County  
Pennsylvania

Jet Lowe, Photographer, 1993

- PA-345-1 VIEW OF CINCINNATI FROM RIVER AT THE M&O MARINE  
CONSTRUCTION, INC.'S DOCK ON THE OHIO RIVER AT THE  
FOOT OF LIGHTHILL STREET, NORTH SIDE, PITTSBURGH.
- PA-345-2 FRONT VIEW OF CINCINNATI. NOTE THE SHIVES ON TOP OF  
SPUDS FOR PIN-UP WIRES.
- PA-345-3 STERN OF CINCINNATI, WITH TRAVELING SPUD IN CENTER.
- PA-345-4 VIEW FROM POINT OF BOOM LOOKING TOWARDS THE STERN OF  
DREDGE. BOTH HALVES OF DIPPER STICK ARE IN  
FOREFRONT OF PICTURE. THE SADDLE BLOCK GOES THROUGH  
THE MIDDLE OF THE DIPPER STICK. ROLLERS, CALLED THE  
"CAT HEADS," HELD THE DIPPER STICK RACK IRON TEETH  
IN MESH WITH THE PINION GEARS.
- PA-345-5 SPARE SHIPPER SHAFT IN MIDDLE OF PHOTOGRAPH. NOTE  
PINION GEARS ON SHAFT. END OF DIPPER STICK IN  
FOREGROUND, NOTE RACK IRON ON BOTTOM OF STICK,  
WHICH MESHES WITH GEARS ON SHIPPER SHAFT. LIVING  
QUARTERS IN BACKGROUND. CYLINDER AND SHEAVES FOR  
OPERATING BULL WHEEL (FOR SWINGING BOOM) ON LOWER  
RIGHT.
- PA-345-6 VIEW OF DIPPER STICK, WITH BUCKET. BULL WHEEL WITH  
SWINGER CABLE IN FOREFRONT. POINT SHIVE AT END OF  
CRANE. THE WHEELS ARE THE BRAKE DRUMS ON THE ENDS  
OF THE SHAFT.
- PA-345-7 DETAIL OF BOOM, WITH SHIPPER SHAFT, BRAKE  
ASSEMBLY, AND POWER DUMP CYLINDER IN FOREFRONT.
- PA-345-8 CRANE BOOM WITH DETAIL OF SHIPPER SHAFT AND BRAKE  
ASSEMBLY. DIPPER STICK AND TWO-YARD BUCKET ALSO  
VISIBLE.
- PA-345-9 DIPPER TENDER (OR CRANEMAN) PLATFORM, FORWARD ON  
MAIN DECK.

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PA-345-10 CYLINDER AND SHEAVES ("SHOTGUN SWINGER"), FOR TURNING BULL WHEEL.

PA-345-11 BASE OF BOOM, WITH HOISTING AND BACKING LINE SHEAVES.

PA-345-12 CAPSTANS ON FRONT DECK. MIDDLE DOOR IS OPEN. ALL DOORS COULD OPEN, TO GIVE OPERATOR AN UNIMPEDED VIEW.

PA-345-13 DETAIL OF TOP OF CAPSTAN.

PA-345-14 INTERIOR OF MAIN DECK--NOTE LEVERS FROM CEILING CONTROLLED BY OPERATOR. LEFT HAND LEVER CONTROLLED THROTTLE, RIGHT HAND LEVER CONTROLLED SHOT GUN SWINGER.

PA-345-15 INTERIOR OF MAIN DECK, WITH POT-BELLY STOVE AND OPERATOR STAND IN CENTER.

PA-345-16 OPERATOR STAND. OPERATOR STOOD BETWEEN RAILINGS AND CONTROLLED DREDGING OPERATIONS USING TWO LEVERS FROM CEILING, THREE LEVELS ON THE FLOOR, AND TWO FLOOR PEDDLES. RIGHT HAND CONTROLLED SHOT GUN SWINGER (BOOM MOVED TO RIGHT WHEN PUSHED FORWARD, LEFT WHEN PULLED BACK, AND, IF LUCKY, STOPPED WHEN IN CENTER POSITION). LEFT HAND CONTROLLED THROTTLE. FLOOR LEVER AND FLOOR PEDDLE ON LEFT CONTROLLED THE BACKING LINE FRICTION. MIDDLE LEVER AND PEDDLE, STUCK IN FLOOR CONTROLLED THE MAIN HOIST FRICTION. LEVER ON RIGHT CONTROLLED THE CYLINDER DRAIN VALVE.

PA-345-17 SECOND DECK DINING AREA. COVERED SMOKESTACK IN REAR, AND WORKERS' ROOMS ON LEFT AND RIGHT.

PA-345-18 GALLEY.

PA-345-19 CREW QUARTERS.

PA-345-20 FIREMAN'S END OF FIRE-TUBE BOILER. MANUFACTURED BY LUCEY. THE BOILER CREATED APPROXIMATELY 150 POUNDS OF PRESSURE.

PA-345-21 FIRE TUBE END OF BOILER, NOTE SMOKESTACK THROUGH THE ROOF AND MASTER VALVE ATOP BOILER ABOVE LADDER TO TURN OFF STEAM TO ENGINES.

PA-345-22 VIEW LOOKING FROM FRONT LEFT OF DREDGE TOWARDS GEAR-DRIVE OF MAIN (HOISTING) ENGINE. "ARM" ON RIGHT IS

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PART OF VALVE LINKAGE. BOX ABOVE THAT IS THE CYLINDER OIL LUBRICATOR.

- PA-345-23 BACKING DRUM IN FOREGROUND. MAIN ENGINE STEP DRUM IN CENTER. TO RIGHT NOTE CYLINDER, PISTON ROD CROSSHEAD. AT END OF CRANKSHAFT NOTE WRIST PIN AND CRANE DISK.
- PA-345-24 CAPSTAN ENGINE (BELOW MAIN DECK).
- PA-345-25 CAPSTAN ENGINE (BELOW MAIN DECK).
- PA-345-26 VIEW FROM FRONT OF BOAT LOOKING AFT AT THE BACKING-LINE DRUM WINCH.
- PA-345-27 VIEW FROM AFT OF MAIN HOISTING ENGINE WITH HOISTING DRUM IN FOREGROUND. NOTE MAIN HOISTING DRUM IS A STEP DRUM, WITH TWO DIAMETERS ON DRUM. WHEN BUCKET IS IN WATER THE CABLE IS ON THE SMALLER STEP, AS PICTURED, GIVING MORE POWER TO THE LINE. THE CABLE "STEPS" TO LARGER DIAMETER WHEN BUCKET IS OUT OF WATER, WHERE SPEED IS MORE IMPORTANT THAN POWER. SMALLER BACKING DRUM IN BACKGROUND.
- PA-345-28 VIEW FROM AFT LOOKING FORWARD. VERTICAL SHAFT GOES TO CAPSTAN BARREL. LARGE DRUM ON LEFT PART OF SPUD ENGINE CABLE DRUM.
- PA-345-29 BEVELED GEAR, PART OF CAPSTAN ENGINE.